

ABSTRACT OF THE DISCLOSURE

Improved high-speed, broadband data communication between a mobile terminal, including aircraft in flight, and secure, private remote networks, can be implemented by using the bandwidth of a single transponder on a satellite. The improved high-speed data communications system uses a single frequency to transmit the broadband data from the mobile terminal to the satellite and the same frequency to transmit the broadband data from the remote network to the satellite. Likewise, the improved high-speed data communications system uses a corresponding frequency on the same satellite transponder to transmit the high-speed, broadband data from the satellite to the mobile terminal and to transmit the high-speed, broadband data from the satellite to the remote network.